

substance: PtSb₂

property: doping, metal substitution

Pt_{0.997}Au_{0.003}Sb₂: $S = + 180 \mu\text{V K}^{-1}$ at 80 K, the same value as in the undoped sample [65J].

Very low solubility of the metallic PdSb₂ and AuSb₂ in PtSb₂ [63H].

Values derived from different p-type samples for the coefficients of

$$\Delta\rho/\rho H^2 = b + c(\sum_i l_i \gamma_i)^2 + d\sum_i l_i^2 \gamma_i^2 + c\sum_{ijk} \epsilon_{ijk} l_j^2 \gamma_k^2$$

where l_i and γ_i are the direction cosines of the current and magnetic field referred to the crystal axes and ϵ_{ijk} is the unit antisymmetric tensor. b/μ_H^2 , c/μ_H^2 ... are functions of $K_1 = m_3\tau_2/m_2\tau_3$ and $K_2 = m_1\tau_2/m_2\tau_1$; m_1 , m_2 , m_3 are the principal effective masses and τ_1 , τ_2 , τ_3 the principal relaxation times of the valence-band ellipsoids centered on the [100] axes [72D].

T [K]	R_H [cm ³ C ⁻¹]	σ [Ω ⁻¹ cm ⁻¹]	μ_H [cm ² /V s]	b/μ_H^2	c/μ_H^2	d/μ_H^2	e/μ_H^2	K_1	K_2	Ref.
77	1.89	913	1720	0.056	–	–	0.0065			65D
77	2.19	810	1770	0.058	–	– (b+c)	–			65D
77	1.57	978	1540	0.072	0.020	– 0.092	0.013			65D
77	2.0	810	1620	0.076	0.015	– 0.094	–			65D
77	1.54	1020	1570	0.164	–	– (b+c)	–			65D
77				0.080	≈ 0.03		0.014	1.4	0.7	72D
4				0.12	≈ 0.05		0.022	1.6	0.7	72D

References:

- 63H Hulliger, F.: Nature (London) 200 (1963) 1064.
- 65D Damon, D. H., Miller, R. C., Sagar, A.: Phys. Rev. A 138 (1965) 636.
- 65J Johnston, W. D., Miller, R. C., Damon, D. H.: J. Less-Common Met. 8 (1965) 272.
- 72D Damon, D. H., Miller, R. C., Emtage, P. R.: Phys. Rev. B5 (1972) 2175.